UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
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Region 10
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Mr. Sheldrake:

The National Marine Fisheries Service (NMFS) reviewed the U.S. Environmental Protection Agency's Proposed Plan for the Portland Harbor Superfund Site (the Proposed Plan) and the Draft Programmatic Biological Assessment (PBA) for the Proposed Plan, and we are providing the comments below as part of your public comment period. The first part of our comments relate to the Superfund Proposed Plan, followed by comments on the Draft Programmatic Biological Assessment. Thank you for this opportunity. It is great to finally see in writing all the hard work that EPA has been doing to get ready on this very important cleanup action.

Comments on the Proposed Plan For the PORTLAND HARBOR SUPERFUND SITE

1. NMFS is concerned with potential impacts of the Proposed Plan to our trust resources, specifically:
    a. Salmon and steelhead. All life history stages for 13 evolutionarily significant units (ESUs)/distinct population segments (DPS) of ESA-listed salmon and steelhead pass through the Portland Harbor (Harbor) or the Columbia River, immediately downstream of the Harbor. Consequently, activities proposed in the Harbor have the potential to affect, both negatively and positively, a significant portion of the West Coast salmon and steelhead populations, including a smaller number of non ESA-listed species that are managed by the Pacific Fishery Management Council (PFMS) for commercial, recreational, and tribal fisheries. Habitat modification in the Harbor, changes in prey availability, and bioavailability and bioaccumulation of contaminants of concern (COCs) in the prey species of out-migrating juvenile salmon and steelhead are all important threats to these species. Longer-term improvements in sediment quality in the Harbor would represent a reduced risk to these populations.

b. Marine mammals. Marine mammal species, particularly southern resident killer whales, feed on salmon from the Columbia River system. Because of the bioaccumulative nature of many of the COCs addressed in the Proposed Plan, potential short-term increases in bioavailability of COCs in the Harbor represent a risk concern for these species. Longer-term improvements in sediment quality in the Harbor would represent a reduced risk to these populations.
c. Southern DPS green sturgeon. As a bottom-feeding species that rears and migrates in the Harbor and mainstem Columbia River below Bonneville Dam, the southern green sturgeon is particularly susceptible to short-term increases in bioavailability of COCs. Longer-term improvements in sediment quality in the Harbor would represent a reduced risk to this population.
d. Southern DPS eulachon (Pacific smelt). Eulachon use the Columbia River downstream of the Harbor and are susceptible to impacts to prey availability and increased bioavailability and bioaccumulation of COCs in their prey. Longer-term improvements in sediment quality in the Harbor would represent a reduced risk to these populations.
e. Coastal pelagic and groundfish species. Many of the coastal pelagic and groundfish species that are managed by the PFMC for commercial and recreational fisheries use the Columbia River Estuary for a portion of their life history stages. The Columbia River Estuary is identified as a habitat area of particular concern (HAPC) for these species, as well as for Pacific salmon, southern green sturgeon, and eulachon. As such, an increase in the migration of COCs to the estuary represents a potential risk to Essential Fish Habitat (EFH) for these species. Longer-term improvements in sediment quality in the Harbor would represent a reduced risk to these populations.

2. Direct disturbance of sediments in the Harbor, either through dredging or capping, are likely to adversely affect ESA-listed salmon and steelhead, depending on where such activities occur in the channel profile. The river regions identified by the EPA do not correspond to the ecological significance certain areas have to specific species. Specifically:
    a. Loss of active channel margin (ACM) and shallow water habitat (SWH) due to bank armoring, development, channelization, and fill within the historic ACM and floodplain are key factors limiting the recovery of some ESA-listed species in the Lower Willamette River (LWR) and Harbor.
    b. ACM refers to the part of the river's edge that occurs at the interface of unwetted shoreline and shallow water, and occurs from ordinary high water (OHW) to ordinary low water (OLW).
    c. SHW refers to areas from the water's edge out to a maximum depth of 15 feet below OLW.
    d. This corresponds with part or all of the following river regions identified in the Proposed Plan: Intermediate Region, Shallow Region, and River Bank Region.
    e. The Proposed Plan is likely to result in significant disturbance of ACM and SWH areas because the Proposed Plan emphasizes dredging and capping in the Shallow Region and River Bank Region to avoid changes in river flood storage and to comply with no net rise requirements.
    f. NMFS strongly recommends further consideration of the remedial actions proposed for ACM and SWH habitats, including limits on sediment disturbance and conversion

of such habitat from submerged to submersible lands, e.g.:

i. Reducing the repose of shorelines and removal of streambank fill to expand the floodway and active channel.
ii. More stringent work area isolation measures when dredging in shallow water habitats.
iii. Provision of more a substantial "beach mix" to provide a habitat layer to enhance recovery of this key habitat type, e.g., (1) a mix of screened and washed 2.5-inch minus gravels (no fines) mixed with sand; and (2) use of a carbon-amended "beach mix" for broader expanse of enhanced natural recovery (ENR) areas.

g. Because of the very high value of these areas for the survival and recovery of ESA-listed species, NMFS favors enhanced natural recovery (ENR) treatments over monitored natural recovery (MNR) in these areas.

3. Sediment sampling and characterization. Before starting remedial activities, NMFS recommends repeating the reach-wide sediment sampling for the LWR, originally conducted in 2008 and analysis of the data collected to:
    a. Ascertain if MNR is observable at the decadal timeframe.
    b. Better assess upstream contributions to the LWR.
    c. Improve our understanding of sediment and contaminant mobility.

4. NMFS remains concerned about the inclusion of the confined disposal facility (CDF) in the proposed action, both from the standpoint of the loss of 15 acres of aquatic habitat (including 3+ acres of shallow water and off-channel habitat), and from the long-term disposition of the facility.
    a. How will wastes that do not meet disposal requirements for the CDF be separated from wastes that meet CDF disposal criteria, particularly for dredge units where such COCs may be adjacent, co-mingled, or layered?
    b. What seismic design requirements will be applied to the CDF, and to armored and engineered caps?
    c. If soluble contaminants will be placed in the CDF, what additional design considerations are necessary to isolate the CDF from the aquatic environment (e.g. slurry wall, impermeable lining, impermeable cover, a pump-and-treat system to remove these COCs)?
    d. On the other hand, if soluble contaminants will be excluded from the CDF, how will such COCs be adequately excluded from the waste stream identified for CDF placement?
    e. How will EPA ensure that any loss of ACM and SWH will be off-set?

5. Please explain how EPA will determine which "applicable or relevant and appropriate regulations" (ARARs) it will either attain or waive as part of the proposed remedy.

6. The preferred alternative indicates a preference for AquaBlocks for use as a sediment cap because these structures achieve greater armor protection in a thinner profile depth. However, NMFS does not support use of AquaBlocks and prefers rock and gravel armor layers, even if doing so results in additional dredge depth.

Comments on the Draft PROGRAMMATIC Biological Assessment:

1. The definition of ACM and SWH should be defined throughout the PBA as noted above. The definitions provided in this letter are consistent with what the Portland Harbor Trustee Council (PHTC) is considering as SWH for their restoration projects in Portland Harbor, and with the definitions that NMFS will use to analyze the effects of the Proposed Plan on ESA-listed species.
2. NMFS is concerned about the long-term stability of any "fish friendly" layers that may be placed over sediment in the Harbor as part of the Proposed Plan. The PBA should make clear that any sand or "beach mix" layer that is placed for habitat purposes must stable over time, including use of reduced slopes as necessary.
3. "Beach mix" or sand covers should be considered as a minimization measure outside of shallow water habitat as well to reduce mitigation requirements in deeper water and bank areas.
4. In section 2.3.2, please define the criteria that EPA will use to determine whether MNR is successful or not, and thus whether additional active clean-up will be required. This must include the number of years beyond the seven years of construction that will elapse before making this determination.
5. As noted above, NMFS remains concerned about the inclusion of the CDF in the proposed action, both from the standpoint of the loss of aquatic habitat and structural integrity in a large seismic event. If the CDF is constructed, it should meet all water quality criteria at the point of discharge.
6. Since the collection of biota for tissue sampling for MNR will likely harm or injure some salmon and steelhead, we will need more details on this procedure in the PBA such as number of sampling design, procedures for safe fish handling.
7. The impact avoidance and minimization measures section seems to include some measures that, as currently worded, do not appear to apply to the LWR.
8. Some methods of pile removal proposed in the PBA, such as clamshell extraction, may cause more adverse impacts than leaving the pile in place. Please work with us to develop a more refined list of pile removal BMPs to include in your final PBA.
9. Please refine the description of the action area to include all areas where contaminants may disperse downstream, areas that may be used for compensatory mitigation projects, and areas that will be used as shipping facilities or affected by ship traffic or other actions necessary to transport contaminated sediment to its eventual landfill destination. Also, note that additional impact avoidance and minimization measures may be necessary for the safe upstream transportation and handling of contaminated sediments.
10. NMFS has not yet determined whether to approve compensatory mitigation projects outside of the Portland Harbor Site, either upstream in the Willamette River or downstream in the Columbia River. NMFS will strongly prefer mitigation to be as close to the impact area as possible, and would appreciate this being explicitly stated as a preference in the PBA as well.
11. The PBA should mention the likely option of credit purchases from approved mitigation banks as an alternative to applicants constructing their own compensatory mitigation projects. In addition, compensatory mitigation would not just involve converting upland to shallow water areas as is stated in the PBA in several places.
12. Why are the effects of only certain chemical groups on salmon and steelhead discussed in the PBA? Are these the only ones expected to be mobilized so that salmon and steelhead are

exposed during the proposed action? The PBA should discuss effects of all contaminants that would likely impact salmon and steelhead during remedial actions.

13. Please consider the impact of large ship wakes as part of the determination of where caps will likely have to be armored, and where "beach mix" is likely to stay in place. Otherwise, EPA is likely to underestimate the amount of compensatory mitigation required for armored caps in the Harbor.
14. Please include any information available on the dispersion of contaminants during remedial dredging, e.g., studies that show the likely concentration, fate and transport of contaminants that will disburse downstream during clean-up operations.
15. Table 5.3 and Section 5.4.2 state that the proposed action "would adversely modify" critical habitat for LCR coho salmon. Please note that the correct determination here is the same as for the other ESA-listed species.
16. For the killer whale effects determination, the PBA states that transport of contaminants from the Site to the LCR would be negligible so salmonid prey of killer whales would be unlikely to be exposed to resuspended contaminants. However, that does not acknowledge that some prey of killer whales would likely be exposed to contaminants during clean-up, and the fundamental role that bioaccumulation of contaminants in the killer whale's food web play in limiting its recovery.
17. Widespread dredging and capping will require the mobilization of equipment from outside the local area. Vessel strikes on whales by equipment moved from Seattle/San Francisco/Long Beach should be considered in the section on interrelated and interdependent actions.
18. Finally, we need to discuss how the Proposed Plan can be captured most effectively and efficiently in a biological opinion.

We look forward to discussing our comments with you soon. Thanks again for all your hard work on this important project.

Sincerely,

Mark Ivenson for

Kim W. Kratz, Ph.D.
Assistant Regional Administrator
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